

CLAIMS

1. (currently amended) A proximal actuator in combination with an actuation sleeve and a medical device, ~~proximal actuator for a medical device~~; said proximal actuator being removably attachable to a proximal end of ~~an~~ the elongated actuation sleeve, said medical device operatively mounted to a distal end of said actuation sleeve, the proximal end of said actuation sleeve is divided into a first section and a second section, an elongated wire or tube member movably retained in said actuation sleeve but fixed to said second section of said actuation sleeve, and wherein longitudinal movement of said actuation sleeve relative to said wire or tube member operates said medical device at the distal end of said actuation sleeve, the proximal actuator comprises:

an actuator body operatively mounted to said proximal end of said actuation sleeve, said medical device operatively mounted to said distal end of said actuation sleeve, said actuator body having a first retaining device and a movably mounted second retaining device such that said longitudinal movement of said actuation sleeve relative to said wire or tube member is caused by spacial movement between said first and second retaining devices thereby operating said medical device coupled to said actuation sleeve;

said first retaining device having a laterally openable clip laterally removably attached and not longitudinally attached to the first section of said actuation sleeve; and

said second retaining device having a corresponding laterally openable clip laterally removably attached and not longitudinally attached to the second section of said actuation sleeve, wherein the second retaining device is moveable relative to the first retaining device such that the medical device is activated and said actuator body and said first and second retaining

devices are adapted to be laterally attached to said first and second sleeve sections prior to operation of said medical device and are adapted to be laterally detached from said first and second sleeve sections after operation of said medical device;

said actuator body having a sleeve defining an aperture, wherein the first retaining device is affixed to the sleeve; and

a sliding member including a first end and a second end, wherein the first end of the sliding member is positionable through the aperture of the sleeve.

2. (currently amended) The proximal actuator according to claim 1, further comprising a grip portion on said actuator body. ~~; said body having a sleeve defining an aperture, wherein the first retaining device is affixed to the sleeve.~~

3. (cancelled without prejudice to reinstate the same at a later time, i.e., without disclaimer)

4. (currently amended) The proximal actuator according to claim ~~3~~ 4, wherein the second retaining device is affixed to the second end of the sliding member.

5. (previously amended) The proximal actuator according to claim 4, wherein the first end of the sliding member is threadably mounted in the aperture sleeve .

6. (previously amended) The proximal actuator according to claim 5, further comprising a control actuator moveably engaging the threaded first end of the sliding member such that the control actuator moves the second retaining member from a first position to a second position relative to the first retaining member.

7. (Previously Amended) The proximal actuator according to claim 1, wherein the first retaining device is in a fixed position relative to said actuator body.

8. (original) The proximal actuator according to claim 7, wherein the second retaining device is longitudinally movable from a first position to a second position relative to the first retaining member.

9. (Previously Amended) The proximal actuator according to claim 1 wherein said medical device has at least a first and a second positional state, said first and second sleeve sections moving said medical device to one of said first and said second positional states based upon the movement of said wire member, attached to said second sleeve section, and said actuation sleeve and said spacial movement between first and a second retaining devices.

10. (currently amended) The proximal actuator according to claim 1 wherein said actuation sleeve is mounted over said wire member and said wire or tube member is a guide wire and said first and second retaining devices are transversely ~~attachable~~ removably attached and not longitudinally ~~attachable~~ attached to said first and second sections of said actuation sleeve.

11. (previously amended) The proximal actuator according to claim 1, wherein the first retaining device is a first spring loaded clip for attachment to said first sleeve section.

12. (original) The proximal actuator according to claim 11, wherein the first spring loaded clip comprises a first alignment indicator.

13. (previously amended) The proximal actuator according to claim 11, wherein the second retaining device is a second spring loaded clip for said second sleeve section affixed to said wire or tube member.

14. (original) The proximal actuator according to claim 13, wherein the second spring loaded clip comprises a second alignment indicator.

15. (currently amended) The proximal actuator according to claim 1 wherein said

wire or tube member is a wire that extends through said actuator sleeve, said wire having a proximal and a distal end, said proximal end of said wire being attached to said second section of said ~~actuator~~ actuation sleeve.

16. (currently amended) A proximal actuator in combination with an actuation sleeve and a medical ~~proximal actuator for operating a distally located medical~~ device, the proximal actuator laterally removably attachable to a first elongated movable member and a second elongated movable member, one of said first and second members forming said actuation sleeve, said first and second elongated members having proximal and distal ends and said medical device operatively disposed thereon at or near said distal ends thereof, said first and second movable members adapted to move longitudinally with respect to each other thereby operating said distal medical device, the proximal actuator comprising:

an actuator body having a first retaining device and a movably mounted second retaining device;

said actuator body operatively mounted to said proximal end of said first and second members, said medical device operatively mounted to said distal end of said first and second members;

said first retaining device having a laterally openable clip laterally removably attached and not longitudinally attached to the first movable member; and

said second retaining device having a corresponding laterally openable clip laterally removably attached and not longitudinally attached to the second movable member, wherein the second retaining device is moveable relative to the first retaining device such that the first movable member longitudinally moves with respect to the second movable member thereby

activating said distally located medical device coupled to said first and second members;

said actuator body having a sleeve defining an aperture, wherein the first retaining device is affixed to the sleeve; and

a sliding member including a first end and a second end, wherein the first end of the sliding member is positionable through the aperture of the sleeve.

17. (currently amended) A proximal actuator according to claim 16 wherein said first movable member is ~~an~~ said actuation sleeve and said second movable member is a wire and said actuator body and first and second retaining devices are laterally removably attached and detached and not longitudinally attached to or detached from the elongated actuation sleeve and wire.

18. (currently amended) A proximal actuator in combination with an actuation sleeve and a medical device, said proximal actuator having a deployment handle removably attachable to ~~an~~ the elongated actuation sleeve and an elongated tube or wire member, said tube or wire member movably disposed in said actuation sleeve and both operatively coupled to a distally located ~~expandable~~ medical device, said actuation sleeve and tube or wire member having a proximal end and a distal end with said ~~expandable~~ medical device distally mounted thereon, the proximal sleeve end is divided into a first section and a second section and the distally located medical device has an expandable frame for capturing embolic material, the deployment handle comprises:

a body with a handle, said body having a first retaining device and a movably mounted second retaining device;

said body operatively mounted to said proximal end of said actuation sleeve, said medical

device operatively mounted to said distal end of said actuation sleeve;

said first retaining device having a laterally openable clip removably laterally and not longitudinally attached to the first section and said elongated actuation sleeve; and

said second retaining device having a corresponding laterally openable clip removably laterally and not longitudinally attached to the second section and said elongated tube or wire, wherein the second retaining device is moveable relative to the first retaining device such that the expandable frame is opened and closed due to longitudinal movement of said actuation sleeve with respect to said tube or wire member;

said body having a sleeve defining an aperture, wherein the first retaining device is affixed to the sleeve; and,

a sliding member including a first end and a second end attached to one or the other of said first and second retaining devices, wherein the first end of the sliding member is positionable through the aperture of the sleeve.

19. (currently amended) The actuator deployment handle according to claim 18, further comprising a grip portion on said handle. ~~;~~ ~~said body having a sleeve defining an aperture, wherein the first retaining device is affixed to the sleeve;~~

20. (cancelled without prejudice to reinstate the same at a later time, i.e., without disclaimer)

21. (currently amended) The actuator deployment handle according to claim ~~20~~ 19, wherein the second retaining device is affixed to the second end of the sliding member.

22. (currently amended) The actuator deployment handle according to claim 21, wherein the first end of the sliding member is threaded through said aperture.

23. (currently amended) The actuator deployment handle according to claim 22, further comprising a control actuator moveably engaging the threaded first end of the sliding member within the aperture, such that the control actuator moves the second retaining member from a first position to a second position relative to the first retaining member thereby causing longitudinal movement of said actuation sleeve with respect to said tube or wire member and operation of said medical device.

24. (currently amended) The actuator deployment handle according to claim 18, wherein the first retaining device is in a fixed position.

25. (currently amended) The actuator deployment handle according to claim 24, wherein the second retaining device is movable from a first position to a second position relative to the first retaining member.

26. (currently amended) The actuator deployment handle according to claim 25, wherein when the second retaining device is in the first position, the expandable frame is in a closed configuration.

27. (currently amended) The actuator deployment handle according to claim 25, wherein when the second retaining device is in the second position, the expandable frame is in an open configuration.

28. (currently amended) The actuator deployment handle according to claim 18, wherein the first retaining device is a first spring loaded clip.

29. (currently amended) The actuator deployment handle according to claim 28, wherein the first spring loaded clip comprises a first alignment indicator.

30. (currently amended) The actuator deployment handle according to claim 28,

wherein the second retaining device is a second spring loaded clip.

31. (currently amended) The actuator deployment handle according to claim 30, wherein the second spring loaded clip comprises a second alignment indicator.

32. (currently amended) A proximal actuator in combination with an actuation sleeve and a medical device, said proximal actuator having a deployment handle removably attachable to ~~an~~ the elongated actuation sleeve and an elongated tube or wire member, said tube or wire member movably disposed in said actuation sleeve and both operatively coupled to a distally located medical device, said actuation sleeve and tube or wire member having a proximal end and a distal end, the proximal sleeve end is divided into a first section and a second section and the distally located medical device includes an expandable frame for capturing embolic material, the deployment handle comprising:

a body with a handle grip portion and a sleeve defining an aperture;

said body operatively mounted to said proximal end of said actuation sleeve, said medical device operatively mounted to said distal end of said actuation sleeve;

a first retaining device affixed to the sleeve and said first retaining device having a laterally openable clip being removably laterally attached and not longitudinally attached to the first section of the actuation sleeve;

a sliding member including a first end and a second end, the first end of the sliding member is positionable through the aperture of the sleeve;

a second retaining device affixed to the second end of the sliding member and said second retaining device having a corresponding laterally openable clip removably laterally attached and not longitudinally attached to the second section of the proximal end of the

actuation sleeve; and

a control actuator moveably engaging the first end of the sliding member within the aperture, such that the control actuator moves the second retaining member from a first position to a second position relative to the first retaining device such that said actuation sleeve moves longitudinally with respect to said tube or wire member and the expandable frame is opened and closed.

33. (currently amended) The actuator deployment handle according to claim 32, wherein when the second retaining device is in the first position, the expandable frame is in a closed configuration.

34. (currently amended) The actuator deployment handle according to claim 32, wherein when the second retaining device is in the second position, the expandable frame is in an open configuration.

35. (currently amended) The actuator deployment handle according to claim 32, wherein the first retaining device is a first spring loaded clip.

36. (currently amended) The actuator deployment handle according to claim 35, wherein the first spring loaded clip comprises a first alignment indicator.

37. (currently amended) The actuator deployment handle according to claim 32, wherein the second retaining device is a second spring loaded clip.

38. (currently amended) The actuator deployment handle according to claim 37, wherein the second spring loaded clip comprises a second alignment indicator.

39. (currently amended) A proximal actuator in combination with an actuation sleeve and a medical device, said proximal actuator having a deployment handle removably attachable

to ~~an~~ the elongated actuation sleeve and an elongated wire, said wire movably disposed in said actuation sleeve and both operatively coupled to a distally located ~~expandable~~ medical device, the ~~expandable~~ medical device having an expandable frame for capturing embolic material, the deployment handle comprising:

a body with a handle, said body having a first retaining device and a movably mounted second retaining device;

said body operatively mounted to said proximal end of said actuation sleeve, said medical device operatively mounted to a distal end of said actuation sleeve;

said first retaining device having a laterally openable clip removably laterally attached and not longitudinally attached to the actuation sleeve; and

said second retaining device having a corresponding laterally openable clip removably laterally attached and not longitudinally attached to the wire member, wherein the second retaining device is moveable relative to the first retaining device such that said actuation sleeve longitudinally moves with respect to the wire member and operates the expandable frame opened and closed and said first and second retaining devices are adapted to be laterally attached or withdrawn from said actuation sleeve and said wire before or after operation of said expandable frame;

said body having a sleeve defining an aperture, wherein the first retaining device is affixed to the sleeve; and

a sliding member including a first end and a second end, wherein the first end of the sliding member is positionable through the aperture of the sleeve.

40. (previously amended) The actuator deployment handle according to claim 39,

further comprising a grip portion on said handle. ~~and said body having a sleeve defining an aperture, wherein the first retaining device is affixed to the sleeve.~~

41. (cancelled without prejudice to reinstate the same at a later time, i.e., without disclaimer)

42. (currently amended) The actuator deployment handle according to claim ~~41~~ 40, wherein the second retaining device is affixed to the second end of the sliding member.

43. (currently amended) The actuator deployment handle according to claim 42, wherein the first end of the sliding member is threaded.

44. (currently amended) The actuator deployment handle according to claim 43, further comprising a control actuator moveably engaging the threaded first end of the sliding member within the aperture, such that the control actuator moves the second retaining member from a first position to a second position relative to the first retaining member.

45. (currently amended) The actuator deployment handle according to claim 39, wherein the first retaining device is in a fixed position.

46. (currently amended) The actuator deployment handle according to claim 39, wherein the second retaining device is movable from a first position to a second position relative to the first retaining member.

47. (Previously Amended) The actuator deployment handle according to claim 46, wherein when the second retaining device is in the first position the expandable frame is in a closed configuration.

48. (currently amended) The actuator deployment handle according to claim 46, wherein when the second retaining device is in the second position the expandable frame is in an

open configuration.

49. (currently amended) The actuator deployment handle according to claim 39, wherein the first retaining device is a first spring loaded clip.

50. (currently amended) The actuator deployment handle according to claim 49, wherein the first spring loaded clip comprises a first alignment indicator.

51. (currently amended) The actuator deployment handle according to claim 49, wherein the second retaining device is a second spring loaded clip.

52. (currently amended) The actuator deployment handle according to claim 51, wherein the second spring loaded clip comprises a second alignment indicator.